

Theses of a PhD Dissertation
PhD Institution of Earth Studies

Regional Problems of the Labour Market in the Small Area of
Baja

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Reasons for the choice of the topic

The appearance of wide scale and permanent unemployment was one of the major characteristic features in the Hungarian economy during the last years of the 20th century. This phenomenon reflected the appearance of regional crisis. It had a particularly serious effect on peripheric areas, either inner or outer, which are far from centers, but are rather on the borders (Balcsóki: 2004). It soon became obvious that in order to make regional differences of unemployment disappear, it is not satisfactory to examine the topic from an economic point of view, but it is also essential to study the characteristic features of the area in question very thoroughly and use these results in practice. I chose the small area of Baja as the basis of my research, not only because I am attached to it through my profession and professional and academic pre-life, but also because there are hardly any regions in today's Hungary as peripheral as this one. This specially situated region lies on the borders of Hungary and Serbia, the Southern Great Plain and the Southern Transdanubia as well as on the borders of Bács-Kiskun, Baranya and Tolna counties. Moreover, it also lies on the meeting point of two big Hungarian geographical areas, the Great Plain and the Transdanubia, markedly divided with the demarcation line of the River Danube. On Hungary's joining the EU in 2004, when our country became part of the bigger and unite socio-economical space, an other peripheral component was created, which is relevant in case of the border areas of the EU. The area of Baja became even more isolated by the Schengen border, the so-called 'Great Wall' so it became a 'euro-periphery' as well. By the establishment of 'NUTS-2' type Hungarian regions, the peripheral characteristics of border areas became even more emphatic. Therefore the harmful effects of the special situation of these areas could be felt not only right after the change of the regime but even today. The issue of the labour market of peripheral areas is particularly up-to-date, since unemployment in Hungary is remarkably increasing again. In order to be able to understand the regional problems of the phenomenon it is inevitable to deal with the appearance of unemployment in Hungary, as well as the general study of the area. In the first part of my dissertation I write about the social, economical, infrastructural and natural environment of the area as well as about the changing economical roles of the region. Under this umbrella I studied the possible reasons for the fact that the area of Baja, which used to be a developed part of the Great Plain, with old traditions and great intellectual values, has got into the background again (CSATÁRI B.1996).

The changes of the labour market of the 1990's resulted in structural changes in case of companies and employment. I found it inevitable to find answers to the regional changes of the enterprises and employers.

During my research what particularly raised my interest was a phenomenon pointing beyond this area, that is, the incredibly quick and widespread employment of people with the 'book of casual employment'. So, as a pioneer, I devote most of my dissertation to my findings in this field. I also examine the general as well as the special regional problems which can be found in the unemployment of the settlements in this particular area. I also found it important to study the existing trends and spatial axes. Not only that, but I also did research on the alternatives of measuring regional unemployment. By the help of the new method of the so-called deep unemployment index I have tried to present the real seriousness of the problem.

As a result of the proximity of the Serbian border, I have also tried to have an insight into the labour market of the neighbouring Zombor area. With that, I would like to

contribute to activating the socio-economic potential of the areas which are in contact as well as to the improvement of the quality of life of the population living in border areas. The dissertation basically focuses on the small region of Baja as well as its environment, economy and the regional aspects of the changes in the labour market around the millennium. At the same time, the dissertation admits that the introduction of the area is not complete. The reasons for the decrease of content are problems regarding length and data collection.

The results of the research concentrating on the labour market of the area of Baja are hopefully going to help in many fields, such as an objective evaluation of the situation, the development of the settlements in the area, as well as defining the necessary modifications of vocational training and labour market. It can contribute to the success of activities aiming to help settlements on peripheral areas to catch up with others. It is particularly true in understanding and dealing with the unemployment problems of the area in the long run.

Antecedents and Aims

A major element of the antecedents of the research is a revision of all the special bibliography which is connected to the topic of the dissertation in the wider sense.

Unemployment, as a completely new factor, mirroring regional and economic inequalities got into the centre of research in the 1990's. The researchers intended to find out which were the concrete social and economical characteristic features that played a part in the forming of the regional differences of unemployment on a national level (FAZEKAS, I.1993). The characteristic features, the main elements and the active components of the changes of the Hungarian configuration have been studied by prominent researchers during the past years, such as György Enyedi, József Nemes Nagy and János Rechnitzer.

Earlier research paid less attention to the possible connections of unemployment and space. The independence of economic space and its formulation has several antecedents. Some define it as independent, abstract space (RECHNITZER, J. : 1994, NEMES NAGY, J: 1998), while other cannot see the reason why it should be divided from natural space (J. Tóth: 1996).

The change of the regime threw a new light upon the development of regional differences. It was partly the growing attention and partly the political intention that launched the largescale Great Plain Research Programme. Its scientific results having pooled up between 1991 and 1993 were published in as many as 14 volumes (CSATÁRI, B.1995).

The need to examine and decrease regional differences grew even stronger during the 1980's, since most European countries had to take the wide-scale appearance of unemployment into consideration. This meant that parallelly with the examination of regional inequalities research also started to study the regional differences of unemployment as well as their reasons. In Hungary, researchers and experts started to carry out deeper regional research on unemployment from the early 1990's, that is, from the start of the structural change of the economy.

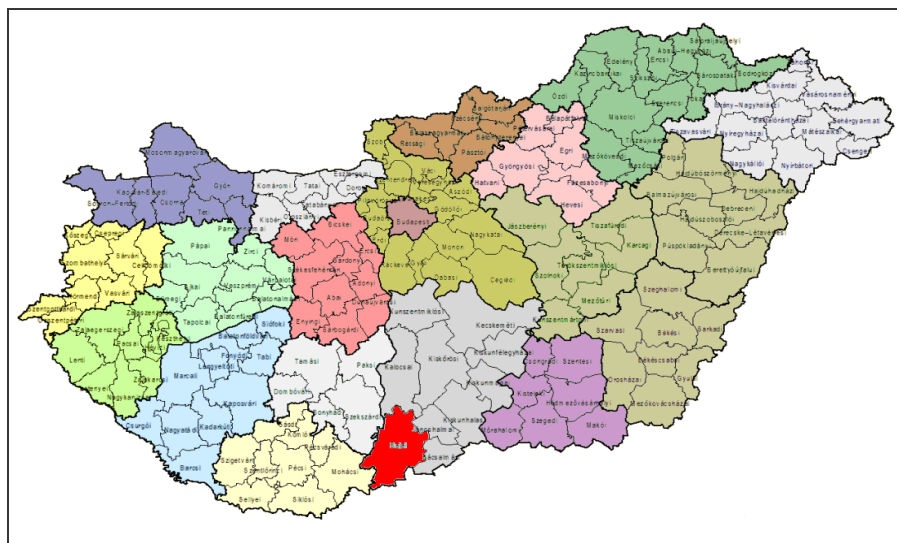
From a peripheral approach, it was especially the eastern, border regions of Hungary that were studied, however, we have little information on southern, peripheric regions. The results of the research done on the southern Plain were earlier published by Ágnes Pál and Gabriella Ancsin Szónokyné (1994, 1996, 1999). Although their research did

not consider Baja as a small border town, their statement is true also for this area. They claim that 'the economy of the small settlements and towns which are directly connected to the borders is lagging behind and is underdeveloped. It is impossible for their businesses to extend their external relations due to their lack of information and infrastructure, so they are not any attractive to foreign capital, either.' Border areas have become 'the periphery of peripheries', just to use an appropriate expression created by József Tóth and partly by Ferenc Erdősi (TÓTH, J.: 1985, 1988; ERDŐSI, F.: 1988; ERDŐSI-TÓTH, ed.:1988). After the enlargement of the EU in 2004 part of the Schengen border moved to the south; it stands out as a wall in regions where it is traditionally desirable to maintain penetrability.

Earlier studies generally examined unemployment on a regional and county level, so numerous analyses were written on the field. I. Balcsók (2005) claimed in his dissertation that labour markets of small areas did not exist. Probably that is why earlier studies devoted hardly any time to examine the unemployment of settlements, even though geographical science, as the science of natural and economical space, normally paid particular attention to these categories of space. The major results of the so-called border area programme are included in an academic study entitled 'The Situation of the Border Areas of the Northern Great Plain – possibilities and opportunities of closing up (BARANYI, B. ed.: 1999). In a remarkable study entitled 'The Effect of the EU Integration on the Regional Disintegration of the Hungarian Labour Market' by Henriett Emese Gerő the author analyses the factors that affect the inequalities of the labour markets in the particular areas. According to B. Csatári (1999) it would be possible to carry out the complete and detailed analysis of the border areas on the Great Plain, which have got particularly important roles after the enlargement of the EU. An analysis of this kind would include, among other things, the different potentials of the peripheries, as well as the issues of the establishment of the role of a gate and the roles of cross-border, international collaboration.

In an almost unique way, the **small area of Baja** has all the characteristic features of peripheries (Illustration nr 1).

Illustration nr 1: The Small Area of Baja among the 174 Hungarian small areas.



Source: KSH, VÁTI, TEIR, 2007.

It is situated on the borders of the Southern Great Plain and the Southern Transdanubia regions, Bács-Kiskun, Tolna and Baranya counties. Its only natural border is the River Danube, flowing on the western side of the area. Its southern border is the country border between Hungary and Serbia. In the region between 1990 and 2001 the number of employees decreased with 10,000 people, out of which 7,000 workplaces disappeared in the villages. The unemployment rate in 1993 got higher than ever before, which has still remained the same, considering either its structure or its size, showing great extremes in the area. Several questions have remained unanswered. What happened with the economy that used to flourish? Where have the employers gone? What new businesses were set up in the area? The question arose: are the indexes currently used appropriate at all to reflect the actual, real size of regional unemployment and the differences between the individual areas? Researchers normally accept as a starting point either the international standard methodology or the number of the registered unemployed persons in the area.

It was only on a few occasions that I met different approaches in technical literature. Cs. Obádovics (2004) created special regional indexes, such as age index, time index, qualifications index, by the help of which he defined the categories of unemployment based on age, the length of unemployment or educational background. These indexes point ahead in the sense that they try to compare one particular characteristic feature of unemployment on the basis of regions. However, there is still no complex index number which would be appropriate not only to show the mathematical proportion of the unemployed and their groups, but would also define the 'depths' of unemployment.

Looking at the unemployment map of the country, normally only the regional differences of the proportion of the unemployed are visible, however, differences in depth and quality are not shown. I intend to solve this dilemma by creating the deep unemployment index as well as by representing regional differences.

According to my presupposition, if the depths of unemployment are also illustrated, the map will change a lot.

Due to the near-border location, I considered it necessary to analyse the labour market situation of the neighbouring Serbian area as well. I have not found an analysis of a regional description of the labour market of Zombor, so I collected data for this part myself. It is definitely worth mentioning that during the early 1990's the Balkan War was raging, from which many escaped to Hungary, mainly Yugoslavian citizens of Hungarian nationality. A valuable research by G. Ancsin Szónokyné (2001) focused its attention on the businesses set up by Yugoslavian immigrants, in villages near the border. Based on earlier study entitled 'About the Regional Distribution of Foreigners in Hungary' by Z. Dövényi (1994), it seems probable that Serbian citizens were present as workforce in Hungary. His findings suggest that foreigners with an immigration licence were registered in every third settlement, but foreign workers only lived in every 25th settlement. This is particularly interesting if we consider the fact that the majority of the 9,500 people in a refugee status registered at the end of 1993 lived along the southern border of the country, in a zone of merely 15 or 20 kilometres (DÖVÉNYI, Z.: 1994). I was curious to find out more about the present situation of those Serbian citizens who have a workpermit in Hungary. Regarding employment in Serbia, I have gathered data by the help of my own research, in which a summary entitled 'Employment of Foreigners in Hungary' made by FHSz (www.afsz.hu) was great help for me.

The technical literature belonging to the topic is rich and wide, however, it is interesting that the Baja region was left out of the research on the near-border parts of the Great

Plain. I have hopes that my dissertation can contribute to a better understanding of the regional characteristic features of the labour market in the Baja area as well as to an exploration of problems of the area which are mainly due to its peripheric situation.

Examining the **historical antedents of the research**, we can see that it is not the first time during the course of history for the Baja area to get into such a peripheric situation. The late 18th as well as the first two thirds of the 19th century meant the 'golden age' of the trade in Baja, due to the spread of steamers on the River Danube. The town became the centre of cereal trade in the southern area where almost all the settlements of the town operated a store of its own. The Ferenc Channel built in 1802, later finished and made navigable made the position of Baja even stronger. In the order of rank of Hungarian towns, Baja was listed 49th in 1715, and 24th in 1828 (BELUSZKY, P.1999). It became a market centre which was able to play more and more roles. Its decline started during the railway works of the 19th century. The newly built railway lines did not go through either the town or its area. In 1879 the representatives who were appointed from Kalocsa, Baja, Zombor, Apatin filed in a petition to the Transport Minister to get support for the railway's building, but it failed so the main line was built between Budapest and Szabadka it was inaugurated in 1885 (RAPCSÁNYI, J. 1934). 10 years later, in 1895 the branch line between Baja, Zombor and Újvidék was built, which could not give Baja back its original economic role. Trianon cut several business contacts, turned busy roads into cul-de-sacs, but the numerous tradesmen, craftsmen and intellectuals did not give up, so the town could soon reconstruct its central role in markets and institutions. Trianon made the Baja area a peripheric one.

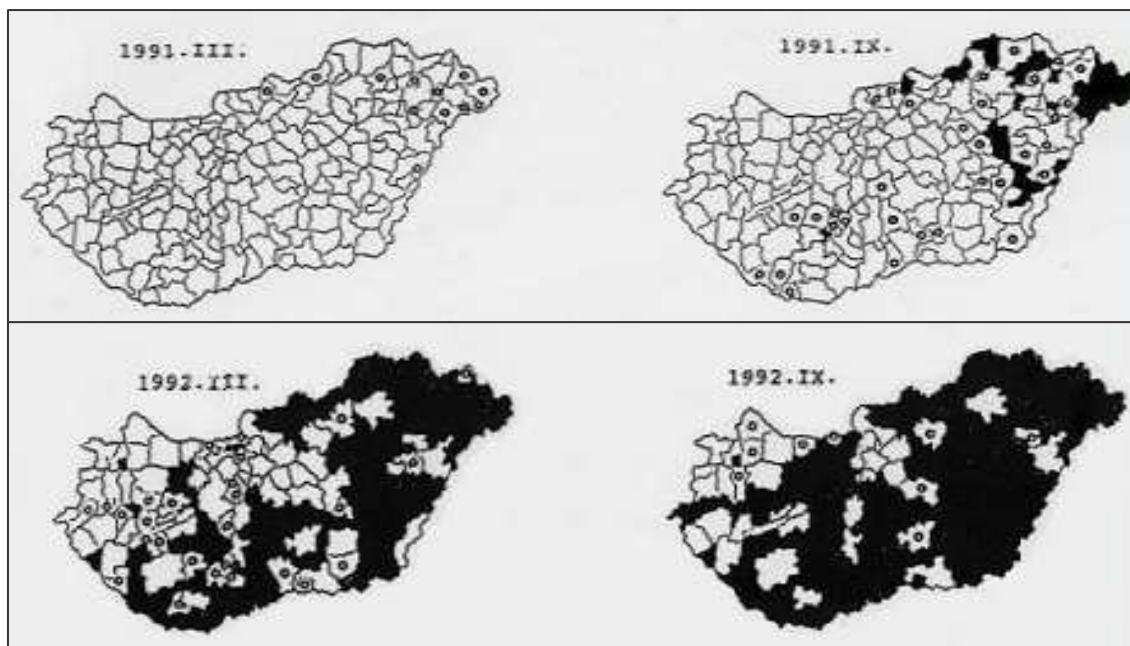
After World War II, the isolation of areas on the Yugoslavian border almost equaled a network of trenches in the area. From the mid-sixties new investments were founded in machinery, so during the 1970's and 1980's further thousands of workplaces were set up in Baja. However, the biggest employers of the area were the local agricultural cooperatives which did industrial outwork as well. The Hosszúhegyi Agricultural Cooperative operated in Érsekhalma and Sükösd, the winery of the Agricultural Cooperative of Baja worked in Vaskút. The green pepper processing plant of KAGE was in operation in Sükösd, there was a Ganz plant in Csátalja and a dairy in Bácsbokod. In Bácsbokod, Mátéháza, Csátalja and Gara the Baja agricultural cooperative operated its plants. The trauma of the area after the change of the regime was not caused by the transformation, since this process happened mostly the same way in the whole of the country.

In the motorway building projects and the decline afterwards, an event of economy history repeated itself, similar to an antedent having happened 100 years earlier. The investors kept away from the Baja region, which the Balkan War also contributed to in a great extent.

Just like the branchline built too late by 1895, the lack of the motorway in our days has also led to drawbacks in the economy of the area which cannot be made up for. The labour market antedents suggest that during the early 90's (from 1993 to 1994) the Hungarian labour market was characterized by the sharp increase of the unemployment, as well as the dramatic decline of employment and economic activity. The earlier structural unemployment was changed by global unemployment. On a regional level, the effects were dramatic, since in crisis areas workplaces were wound up in great quantities. By the collapse of one branch or another, whole areas or settlements got into a difficult situation. All that had a tragic effect on areas 'omitting' workforce, so the

crisis of branches extended into crisis of areas (PAPP, I. 2004). The loss of eastern agricultural markets also made the earlier structural and production system unstable (Illustration nr 2).

Illustration nr 2: Labour market areas with an unemployment rate of over 10 % in the first years of the change of the regime.



Source: OMK, 1995 , based on Csehné Papp I.

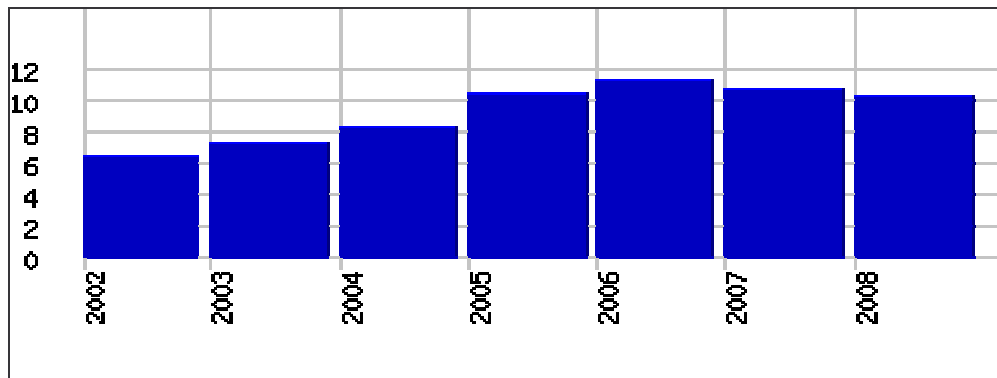
It can be seen (based on map 1992. III) that unemployment first appeared on eastern, and then on peripheral areas. We can add to that the firm determination of the area within the country. Examining the regional differences of the unemployment, we meet basic characteristic features like stability in regional differences, western-eastern orientated dualism, or the inverse proportionality between the size and the unemployment rate of a settlement.

Following the changes of unemployment in Hungary, it can be stated that no reasonable change has happened at the level of regions, counties or the labour market districts. From a regional point of view, it can be said that the regional differences known at the beginning of 1992 lingered on even longer. The regions most affected by unemployment make up coherent areas in the north eastern and eastern parts of the country, while in other parts of the Great Plain and the Transdanubia they are sporadic (I. CSEH PAPPNÉ, 2007). The effect of the motorways being built can be felt in the regional decrease of unemployment. Unemployment decreased along the traces of the motorways. A good example for this is the economic boost of Kecskemét, Kiskunfélegyháza and their surroundings. However, in areas which got to the background there was no such boost, deepening regional differences even more.

The appearance of unemployment in the Baja region had a similar pace to that of other areas. As for the appearance and spread of unemployment, the Baja area is not a typical case in Hungary. The area was traditionally agricultural. During the 1970's and 1980's thousands of industrial workplaces were set up in Baja. In the first wave of the 1990's

most of the big companies in Baja closed down, or they followed their previous economic activities, employing the fragment of their employees. The biggest employers of the settlements in the area, the agricultural cooperatives stopped their major as well as minor activities, by which process the activities of the biggest employers stopped. The vast majority of the people employed in Baja commuted from the settlements of the area on a daily basis, so the first and biggest wave of the unemployed was mainly this group of people. As a consequence, by the summer of 1993, over 6,000 unemployed persons were registered. This growing tendency stopped in 1993 and the regional unemployment constantly decreased till August, 2002 by which time the number of the registered unemployed came down to 2950 persons. Since then, regional unemployment has been steadily increasing. (Illustration nr 3)

Illustration nr 3. : unemployment rate in the area



Source: www.afsz.hu

Unfortunately, the tendency of unemployment got even worse by the end of the research. By the end of 2008 the number of people looking for a job reached the level of 1996. There are remarkable differences between the settlements (in case of the index showing unemployment on a settlement's level the difference between the two extreme indexes is 10 percentage point. By the end of 2008, as an effect of the international economic crisis, over 4,900 people were registered who were looking for jobs.

The main aim of my dissertation is to introduce the main regional characteristic features of the labour market in the Baja area. Based on the evaluation of the results, I aim at giving recommendations to the managers of businesses present in the area, or those who intend to move here. I also intend to give suggestions to colleagues of institutions who can have either a direct or indirect effect on the development of regions, settlements, economy or the local labour market. An essential aim of my dissertation is to attract the attention of experts trying to handle unemployment on the regional aspects of regional aspects of regional unemployment, as well as its settlement trends, different methodological possibilities of measuring it and the better understanding of its problems.

My partial aim is to describe the process how the area of Baja got into a peripheric situation, as well as finding connections between the peripheric location and the local unemployment. By doing so, I have an intention to contribute to making the process stop. It was also my aim to find connections between the geographical location of the

people applying for a book of casual employment, the employment habits of the employers, as well as the increase in the number of the registered unemployed people. By the analysis of the labour market in neighbouring Serbia and the examination of Serbian employees present in the Hungarian labour market I also intent to show the possibilities for cooperation in the border areas. My study will hopefully help to satisfy the human research needs of the small and medium scale enterprises in the area and it will also help to contribute to the more exact planning of vocational training. I believe that my research will make the members of the area's labour market understand the main trends and processes of the labour market in the area, as well as the structural and regional aspects of employment and unemployment.

My hypotheses

1. Due to the economical changes of the 1990's, the area of Baja is getting into a more and more peripheric position, which process is accelerating towards the settlements at the edge of the area. Paralelly with the strengthening of the peripheric situation, unemployment is increasing, which determines the basic demographic processes of the area.
2. The economic structure of the area, which changed after the change of the regime, at present does not serve the extension of employment. Companies produce goods of little added value, or respectively, provide services of low efficiency. In the peripheric settlements of the area the level of business activity is lower.
3. Employment with the casual employment book as an atypical form of employment spread dynamically in the area as well as in Hungary after 2004. This way of employment, as opposed to its original aim, resulted in the growth of unemployment, the decrease of employment as well as the rise in illegal employment. The present way of its use causes great harm in employment.
4. Unemployment in the small region is growing, in the peripheric settlements of the area the problem is growing deeper and deeper. As a result of the effects of the country border and the River Danube, within the settlements of the area near-border unemployment axes were formed. By weighting the number of the unemployed who can be considered as being in a situation of many drawbacks, a complex regional, settlement-level and depth unemployment index can be created which provides a clearer picture of the size and depth of unemployment, and their differences between the areas given. If, using this index, we create the settlement map of unemployment, we get a 'landscape' whose unemployment is different from the one known before.
5. In the neighbouring Serbian territory the size of unemployment is similar. The labour markets of the Baja and Zombor areas have a little effect on each other. A great number of Serbian employees migrate to the Baja area.

Research methods

For creating the database necessary for my research I had two basic sources. One one hand, I used already existing databases, however, I also collected data myself. Taking the principle of complexity into consideration, I analysed the census data of 2001 as well as the relevant data collected by KSH (Central Statistics Office). I gathered data

from KSH and FSzH (Employment and Social Office), categorized them and put them into charts. I illustrated the settlement-level data individually, on settlement-border maps. Paralelly with the map-illustration of each index number I put the data in order and I considered the ranks on the list as a rank in the group of settlements. For the cartograms created this way I wrote descriptive texts. For the description of settlement data of unemployment I used the relative settlement indexes by the Baja Office of DaRMK (Regional Job Centre of the Southern Great Plain), published by ÁFSz. As for the unemployment and employment data, I selected them from the ÁFSz-KMSR database (Statistical Database of Small-Region Unemployment).

I set up a SWOT analysis of the spheres of TÁGINTER (social, economical, infrastructural and natural space). I took these analyses into consideration, and having them, I took a look at the structural and regional problems of the unemployment of the small region. Using the tetrahedron model regularities of the settlements as well as structural similarities, I extended them to the possible levels of the Baja region, as a cooperating network of the spheres.

Out of quality techniques, I used the questionnaire and the interview during my research. I reconstructed the number of the employees of the companies of the 1980's by asking questions from the ex-leaders of the companies and settlements. Asking questions from the local authorities of the settlements created a basis for the implementation of a research carried out by the help of questionnaires. At the same time, it had another great advantage: the answers provided by the self-governments did not reflect the opinions of only the individuals, but also, that of the population, that is to say, the opinion of the vast majority of the people living in the settlements. In the case of questions requiring trustworthy information, the latest information was revealed by the local authorities. I made a survey based on questionnaires for mayors, and also made interviews with businesspeople and employment experts. All these were essential extra resources for the research as well as for writing my dissertation.

For examining casual employment, like an atypical means of employment, I studied the effects of the law of 1997 nr. LXXIV and its modifications, also in a regional aspect. I collected and put into categories data published by the regional authorities of ÁFSz.

The data provided by KSH as well as by OMMF (National Authority of Employment and Labour Safety) were also of great help to me. While analysing the documents, I tried to get an insight into the problems leading to legal regulation, as well as the reasons for the creation and later modification of the law regarding employment with a casual employment book, as well as the tendencies of the phenomenon. In my research I intended to get an answer to my question whether or not this means of employment has increased the defencelessness of employees, rather than making employment more flexible.

In connection with the employment of Serbian citizens in Hungary, I surveyed the work permits issued between 2004 and 2007 in Bács-Kiskun and Csongrád counties. Not only that, but I also studied the analysis by FSzH about the employment of foreigners in Hungary. I made an interview with the Zombor regional manager of the Serbian National Employment Office. I translated the English language information published on the homepages of the Serbian employment agency, which, however, provide far less information than their Hungarian counterparts. To complete that, I studied the technical literature available on the Internet on the Serbian labour market. In spite of the difficulties, I got relatively correct labour market information regarding unemployment

on the other side of the border, as well as regarding its regional and settlement-level problems.

In my study, I tried to create a complex unemployment index which is suitable for showing both the quantity as well as the quality parameters of unemployment. I basically used the settlement indexes and the unemployment depth indexes (the latter created by myself), to be able to compile a regional index of a new approach. I compared the relative indexes published by FHSz with the new, complex index. I studied the cases when the values were congruent, and the cases when they differed from each other, and the possible reasons for that. By the help of illustration on maps, I looked for unemployment axes or areas which were similar from the point of view of unemployment. I gathered the unemployment data of the Baja Office of DaRMK and categorized these from different points of view. The unemployment analyses of KSH and FSzH were also of great help to me. I studied those calculation methods of unemployment which are used by KSH and ÁFSz for the calculation of different indexes. By weighting the numbers of the unemployed in the 5 most disadvantageous groups, I created the index called MMM (deep unemployment index). From the point of view of forming the MMM, it was essential to weight the disadvantages given. I weighted these components after getting the opinion of the members of the labour market, leaders of the settlements and the experts. As a consequence, the factors and the weight of the index were the following:

I formed the weight number from 0 to 0.5, to make the comparison easier.

- | | |
|---|-------------|
| - unemployed without work experience | weight: 0.2 |
| - permanently unemployed | weight: 0.5 |
| - people with max. 8 primary school education | weight: 0.4 |
| - persons with a decreased capacity of work | weight: 0.2 |
| - persons over 50 | weight: 0.3 |

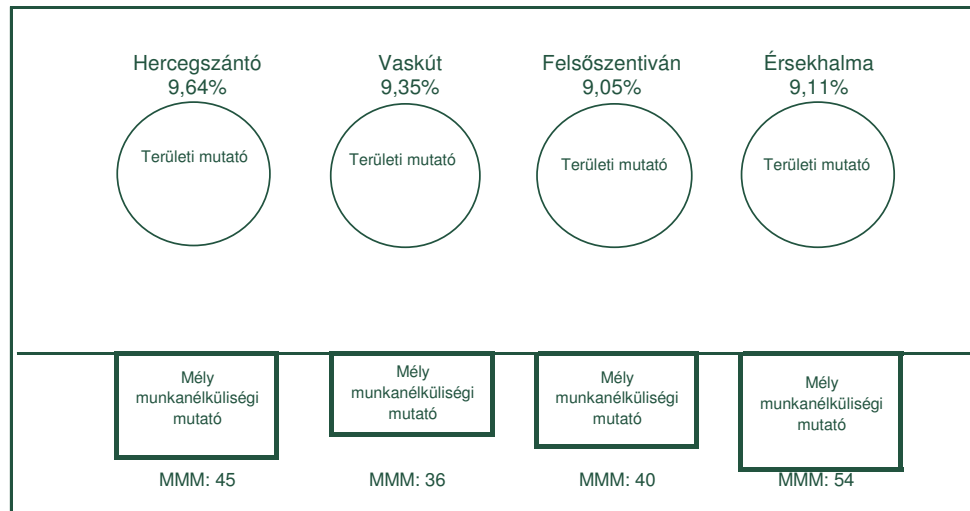
From the settlement data provided by the job centre I selected the number of the target group given (x), from that I calculated the proportion of groups in disadvantageous situations, and I multiplied that with the weight number of the component.

X/P (proportion of persons with no work experience)	0.2 = A
X/T (proportion of the permanently unemployed)	0.5 = B
X/A (proportion of persons with max. 8 primary education)	0.4 = C
X/M (proportion of persons with a decreased capacity of work)	0.2 = D
X/Ö (proportion of unemployed persons over 50)	0.3 = E

$$A+B+C+D+E = \text{DUI}$$

Calculated by the method above, the deep unemployment index is a number between 0 and 140. From the point of view of the disadvantages, zero is an optimal case. In this case, for instance, each registered unemployed person is not permanently unemployed, is around 30, a skilled worker. From the same point of view, 140 points refer to the most disadvantageous situation: everyone is over 50, has 8 primary education as well as a decreased capacity of work, and is permanently unemployed. By the help of an Excel chart I categorized and compared the existing settlement indexes and the data of the settlement MMM compiled by myself. (Illustration nr 4)

Illustration nr 4: The unemployment indexes of four settlements from an old and a new approach



Source: It's my work, based on dates of ÁFSZ, january 2008.

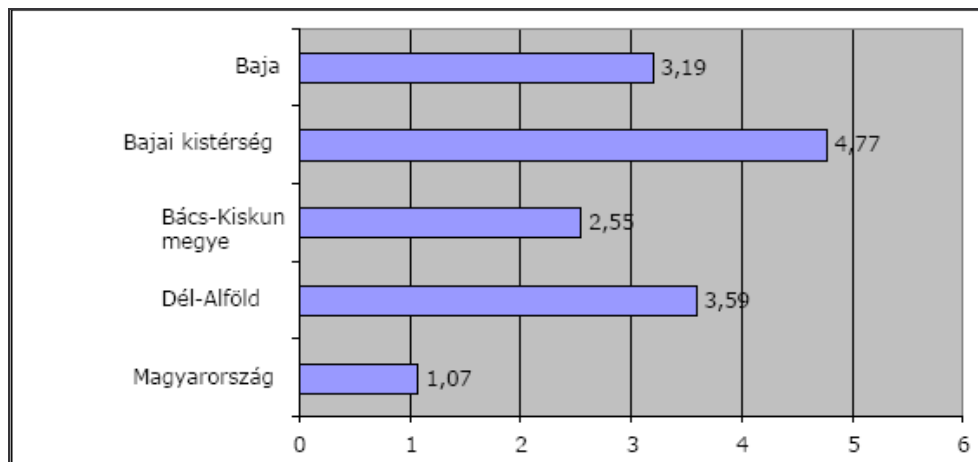
After that, I compared the regional depth order with the order made with the regional index. Since actual unemployment is a combination of the horizontal and vertical unemployment of a settlement, I calculated the product of multiplication of TMM (regional unemployment index) and MMM (depth unemployment index). So from this approach: TMM multiplied by MMM makes TÖM (settlement's overall index). By doing so, I got the settlement's overall index (TÖM). With the 3 indexes I set up an order of the numbers of the unemployment situation (TÖM). I made a comparison regarding the values of the currently used indexes. To illustrate my approach I used horizontal and vertical illustration.

The scope of my research in the wider sense is between 1990 and 2008. Although I did not have whole ranges of data at my disposal, I found the data of the more interesting time periods (the millennium, Hungary's joining the EU) suitable for describing the regional aspects of several outstanding phenomena.

A summary of the results. Recommendations.

1. The Baja region is starting to have all the characteristic features of peripheries. For the past decades the isolating quality of the outside borders were domineering. The peripheric situation of the area only became worse after Hungary's joining the EU in 2004, along the Schengen border. However, that does not determine the fate of the area. The population decreased above average. As a consequence of the few workplaces, youngsters have a growing intention of leaving the area to find work elsewhere. This creates a basis for the main demographic characteristic feature of the area, that is to say, the decrease and ageing of the population (Illustration nr 5)

Illustration nr 5: The decrease of the population 1997-2007(%)

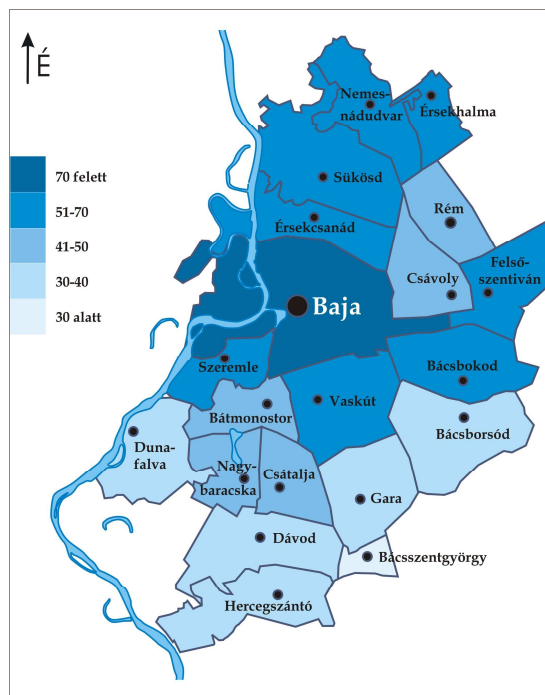


Source: It's my work, based on dates of KSH

Recommendation: I consider it highly important to have a highway built across Baja and Bátaszék, which would connect the area with motorway M6 being built. I also suggest that the border station of Hercegszántó should be rebuilt so that freight transportation vehicles can also enter it. The border stations of Baja and Bácsbokod should also be opened as soon as possible. All these would have a stimulating effect on economy, the expansion of workplaces and the keeping of the population.

2. The economic basis of the area is agriculture and the processing industry built on it. However, tertiary functions like transport are also remarkable. One of the most serious problems of the region's economy is the low added value content of its products. This can be explained mainly by the predominance of agriculture, the not too modern technology of processing industry and the low presence of innovative activities. Most enterprises employ 1 to 9 people, and most of these businesses are to be found in Baja. Summarizing the regional changes of employment, it can be seen that employers are concentrated more and more in the direction of Baja. If we examine the proportion of businesses per 1,000 inhabitants, above-average business activity can be noticed in settlements which are situated near the centre of the area, have bigger population as well as a bigger population density, are near main roads, are populated by people of German origin, or by Christians. Below-average business activity is noticeable in the southern periphery; these settlements have a smaller population density, are inhabited by southern Slavic people, are on the riverbanks of the Danube or near the border, and are over 15 kilometres away from Baja (Illustration nr 6).

Illustration nr 6: Businesses per 1,000 inhabitants per settlement.

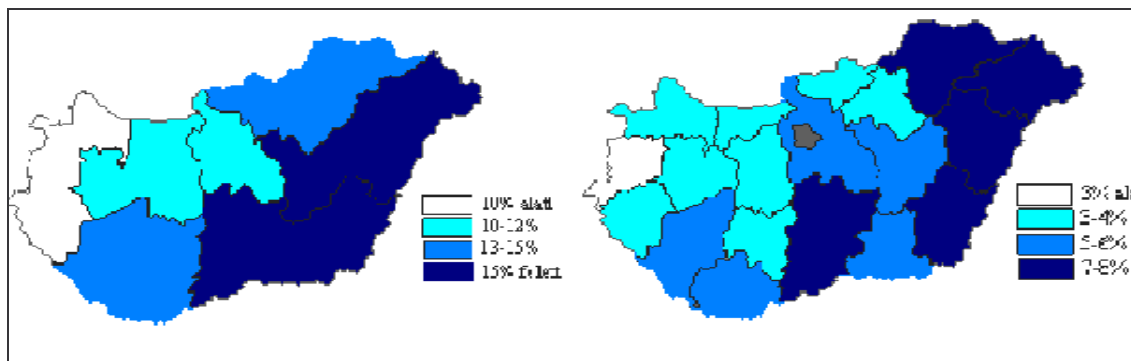


Source: It's my work, based on dates of KSH, 2003.

Recommendation: Local authorities ought to contribute to the immigration of new, innovative, modern businesses into the area. This could be done by many ways of stimulating them to do so, such as tax reductions. Innovative businesses should be attracted into the area by regional cooperation, well-directed regional development as well as incentives provided by the settlements, e.g. providing land for them at reduced prices, infrastructure development support, tax reductions and so on. In order to reach this aim, the integration of József Eötvös College in Baja into the project is inevitable, and it is essential to develop its business management programme. It is important for local vocational schools to take a more active part in the improvement of training which focuses more on the labour market. It would be practical for the Regional Training Centre of Kecskemét to set up a basis in Baja, and apart from that, András Jelky Vocational School should extend its activity to the vocational training of adults. Breaking it down to each settlement of the Baja region, it would be practical to develop a common business-improvement strategy in settlements lacking enterprises, with an action plan for each. As it is a area of many nationalities, we should build on its international cultural connections, this way stimulating the integration of foreign capital by not only offers coming from individual settlements but also from regions. It would result in the increase of regional employment if the Baja region initiated cooperation with the neighbouring Bácsalmás and Jánoshalma, as well as the Zombor regions. By this collaboration, they could create the homogenous 'Organic Bácska' image, building on old traditions of quality products, called 'Kincses Bácska', or the 'Treasures of Bácska'.

3. A further result of the research is the exploration of negative effects of casual employment on the regional labour market. Casual employment, as an atypical means of employment, spread in great quantities not only in the region but also in the whole of Hungary. I extended my research on areas also beyond this one, so it is possible to draw consequences from it which are true for the whole of the country (Illustration nr 7).

Illustration nr 7: Number of issued books of casual employment per region and per county in 2006.



Source: It's my work, based on data of FSZH, DaRMK

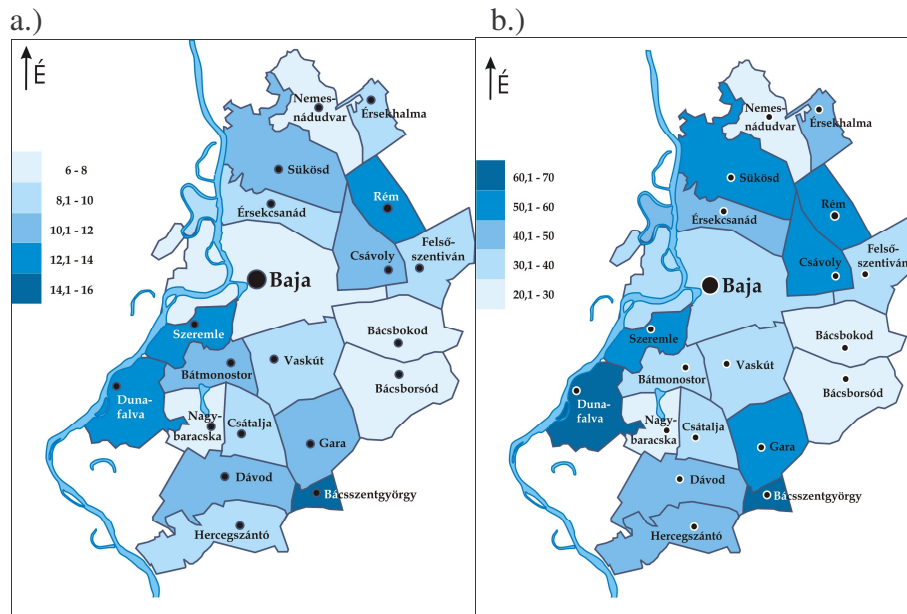
As for the phenomenon of the casual employment book, it can be said that it is extremely widely spread in the less developed parts of the country. Employers use the possibility of this means of atypical employment, thus making hundreds of thousands of people defenceless. The comparison of national and regional data confirmed my presupposition that even though this means of employment used to have positive effects, its drawbacks soon became obvious.

Evaluating the data in my research, it can be claimed that in 2006 and 2007 in the examined areas the number of registered unemployed persons, employed persons, illegally employed persons and persons employed with a book of casual employment all grew. In the Baja region in 2008 as many as 11,000 valid books of casual employment were held by employees. The phenomenon of the book of casual employment is well characterized by the fact that it was held by 15% of the active population in Hungary at the end of the examined period. At the same time, the inspection of OMMF suggests the fact that the number of misuses of the book of casual employment and illegal employment increased for the past years. If this process does not stop, the whole of Hungary can become the 'country of casual employees'. It is to be feared that as an effect of the world crisis which can be experienced at the end of 2008, this type of employment becomes even more widely spread.

Recommendation: the rule on casual employment needs modification as soon as possible. It is important to return to the aim of the original rule issued in 1997. Originally, the rule stated that this form of employment was allowed to be used only by private employers and agricultural ones, as well as in the case of seasonal agricultural workers. Such a modification would have serious consequences also on the increase of tax payments and other contributions.

4. The area of Baja cannot be considered as typically Hungarian from the respect of unemployment. In the growth of unemployment between 2001 and 2008 two axes can be noticed: the former is from east to west, the latter is near the border. The increase of unemployment can be noticed also in the centre of the region, in Baja. There are remarkable differences between the settlements of the region whose situation is changing for the worse. In respect of the settlement indexes of 2008, it can be noticed that the farther a settlement is located from Baja, the higher its unemployment rate is. I have created the deep unemployment indexes (MMM) of the settlements in the region, by weighting five components. I have got a dual result. One of the results is the new dimension of the size of the regional unemployment, the other is in fact the creation of a new method (Illustration nr 8).

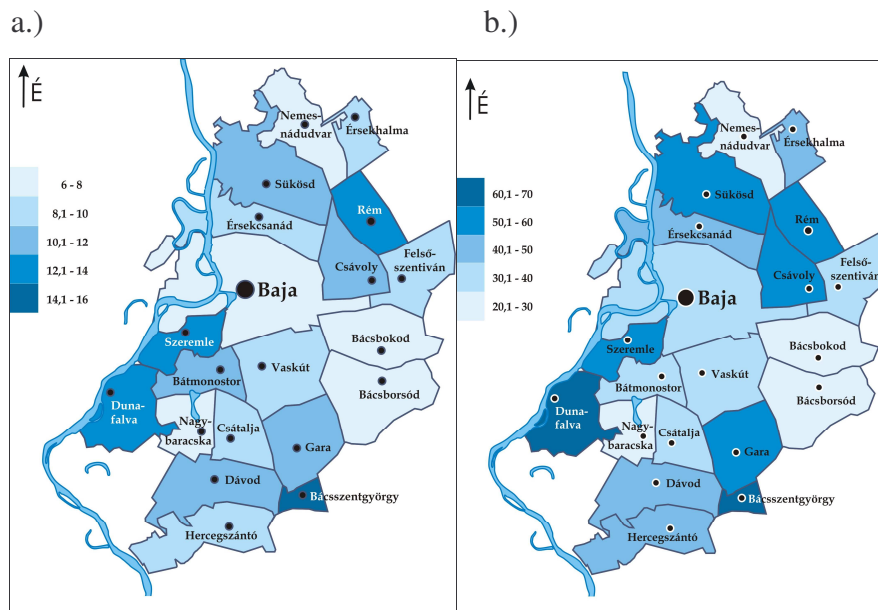
Illustration nr 8: The regional representation of the proportion of regional unemployment and deep unemployment index.



Source: It's my work, based on dates of FSZH, DaRMK, january 2008.

The application of this method is new, as opposed to the unemployment index so far used. It is new in the sense that it takes into consideration also the quality differences of unemployment. From the traditional unemployment indexes and the indexes of the new calculation it becomes obvious that between 2 settlements whose traditional unemployment index seemed to be the same, the difference in fact may be two times as big. The indexes, from the point of view of depth, correlated only in Duna-falva. This result raises the question of support allocation as well. It can be seen that the interventions of settlements are not proportional to the size of the unemployment of the settlements and do not serve properly the elimination of regional inequalities. As a result of the regional modelling of the complex settlement index (TÖM), it can be stated that in the cases of Sükösd, Csávoly, Gara, Baja, Hercegszántó the situation is more serious than shown by the regional indexes. In the cases of Bátmonostor and Szeremle, however, the settlement unemployment index is lower (Illustration 9).

Illustration nr 9: a comparison of the map of traditional unemployment and the map which takes deep unemployment into consideration (TÖM).

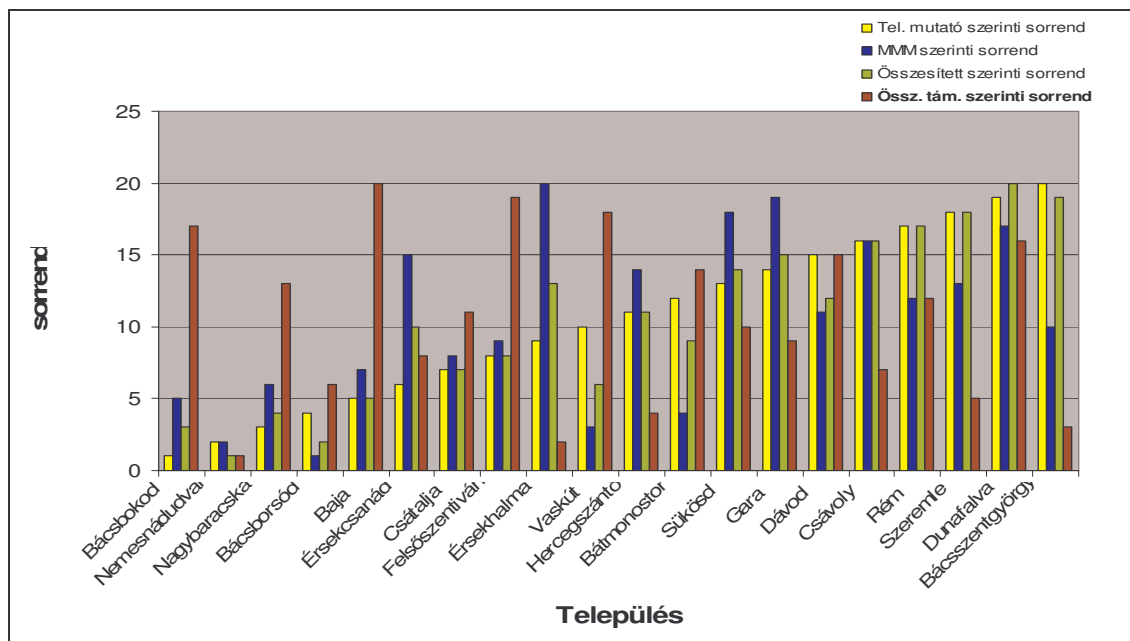


Source: It's my work, based on dates of FSZH, DaRMK, january 2008.

From the method presented above, it becomes clear that this dimension differentiates settlements to a great extent. It creates a new order of problems as compared to the application of the traditional unemployment index.

From the settlement comparison of the TÖM map, I got the result that there was an axis along the River Danube, an other one along the Serbian border and a last one on the area called 'Homokhátság'. In all the areas mentioned the unemployment of the settlements is bigger than the regional average. Comparing the unemployment data of the two methods I concluded that the two types of unemployment indexes in the settlements differed from each other to a great extent. Comparing the two types of data I concluded that the unemployment indexes of the settlements were highly different. From the indexes of new approach it becomes clear that the numbers so far applied to characterize unemployment are misleading, and the order of unemployment, considering depth as well, changes a lot (Illustration nr 10).

Illustration nr 10: the settlement order of unemployment with the index so far applied and with the new index. The order of support of public interest per person in 2007.



Source: It's my work, based on dates of DaRMK,2008

This result raises the issue of the continuation of the previous allocation of support, too. On comparing the order of settlement data, we can see that the settlements' interventions do not correlate with the sizes of the unemployment of the settlements and do not serve properly the elimination of regional inequalities. As a result of the regional modelling of the complex regional index it can be said that in the case of Sükösd, Csávoly, Gara, Baja and Hercegszántó the situation is more serious than shown by the settlement indexes. In the case of Bátmonostor and Szeremle the settlement-level unemployment is lower. From the indexes of new approach it becomes obvious that the numbers so far used for the treatment of unemployment are misleading, the so far used settlement order of unemployment changes a lot.

Recommendation: To compare the unemployment of regions, apart from the use of relative index, I also consider beneficial the use of deep unemployment index. By the help of this strategy, the analysts of economy and regions, experts of economy, settlement planning and regional development could see unemployment from a different point of view. By its use they are going to see a new 'unemployment landscape', whose surface, 'valleys and hills' differ from the original picture to a great extent. The new strategy helps to more exact decision-making, as well as to the more fair and effective distribution of regional interventions and support.

5. Examining the situation of the labour market of the near-border areas I got the following results. Mobility between the labour markets is non-existent, the labour markets of the two areas are isolated from one another. In the early 1990's, apart from the people who fled from the war and were forced to set up businesses, the presence of

Serbian employees in Hungary and in the region is minimal. After Hungary's joining the EU some increase could be felt in the number of requests for work permit; however, Hungary is absolutely not the target country for Serbian people who have an intention of working abroad (Chart number 1).

Chart number 1: Work permits issued to Serbian citizens between the years of 2004 and 2007.

year	Hungary	Bács-Kiskun	Csongrád
2004	1321	98	108
2005	1578	65	297
2006	1894	179	333
2007 I-IX.	1539	110	272

Source: FSZH, DaRMK, Békéscsaba 2007.

There are still several obstacles to the economic cooperation of the two areas, both bureaucratic as well as economic. Both areas are peripheries, their transport connections are missing. Until Serbia's joining the EU, crossing the Schengen border is extremely difficult. Commuting on a daily basis is out of the question since employment is strictly controlled in both countries. The movement of persons is further aggravated by the fact that Serbian citizens strictly need a visa to be able to enter Hungary or the EU. The income conditions of the areas do not have a great effect on the employees of the neighbouring areas. It is also to be taken into consideration that at the time of the study the economy of the Zombor area is of extremely low efficiency, while its level of unemployment is high.

Recommendation: Building on the twin-town connection of Baja and Zombor, cultural connections are to be developed. Schools need to be involved in it, in order to mutually introduce good regional practices. Thus the economic collaboration can become reality, right after the disappearance of the Schengen border. Both sides have to make further efforts to build a border station near Gara. At the same time, the politicians and experts of both regions need to encourage the opening of the border station of Hercegszántó also for freight transportation.

In my dissertation, I have tried to introduce not only the present situation but, considering tendencies, I tried to attract attention to anomalies and opportunities which can provide new perspectives to evaluate labour market on a regional level, make interventions more effective, to prevent the region from becoming totally peripheric. I hope that the results of my research can be of use from the point of view of further development which aims at the improvement of the economic situation of the area, as well as the equal improvement of the settlements. I hope that my results will contribute to the planning of the expansion of employment from a regional aspect, as well as the decrease of unemployment. Hopefully, it will prove to be helpful for people working in regional planning, researchers, labour market experts and the businesses which are about to settle down here, and also for the implementors of long-term regional

development plans, for experts of settlements and leaders. Last, but not least, I believe that a new way of measuring unemployment and the revealing of the drawbacks of casual employment will contribute to a better understanding of national problems of unemployment, their treatment and the elimination of regional differences.

Further tendencies of the research

The research regarding the labour market changes of the small region is far from being complete. The dissertation is based on the natural, economic, transport and infrastructural study of the area, as well as the comparison of the results of the regional correlations of unemployment.

Apart from the results I got, several other essential factors are worth of further research. I am summarizing them as follows:

- A further great challenge is the structural analysis of the labour market in the area, and revealing their cross-sections by the better exploitation of IT technology.
- Revealing the regional differences of unemployment in Hungary by the deep unemployment index as a research topic on its own can prove to be a great challenge in the future.
- It would be exciting to examine the possibilities of breaking free from a peripheric situation, and the opportunities of collaboration for the small regions of the Lower Danube Valley.
- The possibilities of cross-border collaboration and economic connections can be a further independent topic for research.

Publications having published in the field

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2. Szenoradszki, E. 2009. : Regional characteristic features of businesses in the area of Baja. Modern Geográfia, pp.1-15. (www.moderngeografia.hu)
3. Tésits, R. – Szenoradszki, E., 2008: The Expansion of the Casual Employment Book in Hungary. In: Geographical spaces from the points of view of centre and periphery. University of Pécs (is being published)
4. Szenoradszki, E. 2008: Deep Unemployment Index (MMM) through the example of the settlements of the Baja area.
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7. Szenoradszki, E. 2007: A comparison of the small areas of KSH with the labour market areas of regional job centres. Labour Market Journal, volume 51.3. ISSN 0541-3559, pp 37-39.
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10. Szenoradszki, E, 2001: One hundred handshakes. Labour Market Journal, volume 45, 6. ISSN 0541-3559, pp 41-42.

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2. Szenoradszki, E, 2009: Labour-market opportunities, employers' needs in the Baja region. International Conference. Local Authorities of Bács-Kiskun County, Methodological Institution for Students with Special Needs. Baja, 16 and 17 April, 2009
3. Szenoradszki, E. 2008: Deep unemployment index (MMM), as a means of measuring regional unemployment, based on the example of the small area of Baja. First section. International Conference titled 'Society and Economy – new trends and challenges'. EJF Baja, 19 September 2008.
4. Szenoradszki, E. 2008: Strategies to place back to work unemployed people with several disadvantages. III. Integrational Conference. Újváros General Culture Hall, Baja, 5 February, 2008
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Other publications

1. Szenoradszki, E, 2005: Setting up regulations; feedbacks. In: Madarász, S. (ed.) 2005. Handbook for the introduction of quality control activities of regional job centres. Employment Office, Budapest, pp53-55.
2. Szenoradszki, E, 2005: Sharing work within quality control activities and its organizational framework. In: Madarász, S (ed) 2005: Handbook for the introduction of quality control activities of regional job centres. Employment Office, Budapest, pp 53-55.
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1. Szenoradszki, E: 2008: Tendencies of the labour market of the Baja small area. Professional Forum of Rehabilitation. DaRMK, Baja, Hotel Duna, 11 June 2008.
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